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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,998	03/26/2004	Ling Su	16055US01	8997

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CHRISTOPHER C. WINSLADE
MCANDREWS, HELD & MALLOY, LTD.
34th Floor
500 West Madison St.
Chicago, IL 60661

EXAMINER	
SAMS, MATTHEW C	
ART UNIT	**PAPER NUMBER**
2617	

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/810,998	SU ET AL.	
	Examiner	Art Unit	
	Matthew C. Sams	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-12 and 16-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Michaelis et al. (US 2004/0009751 hereafter, Michaelis).

Regarding claim 1, Michaelis teaches a method of coordinating wireless communications between two wireless transceiver circuits by assigning first and second priority indications to first and second transceiver circuits where each priority indication may be selected from a plurality of available priority indications (Page 1 [0004-0006]), receiving or transmitting data on the first wireless transceiver circuit in accordance with the relative priority indication to the second priority indication (Page 1 [0005]), detecting a predetermined application that configured to receive or transmit data on the second wireless transceiver circuit (Page 1 [0003]), assigning a third priority indication to the second wireless transceiver circuit when the predetermined application is detected and receiving or transmitting data on the second wireless transceiver circuit in accordance with the relative priority of the third priority indication to the first priority indication. (Page 0004-0006] and Page 2 [0021-0025])

Regarding claim 3, Michaelis teaches the access terminal permits certain applications to request specific network interfaces for services tied to a specific service bearer, which would be the highest priority available. (Page 2 [0025])

Regarding claim 4, the limitations of claim 4 are rejected as being the same reason set forth above in claim 3.

Regarding claim 5, Michaelis teaches a second wireless transceiver circuit comprises a Bluetooth application (Fig. 1 [14G]) and the predetermined application comprises a Human Interface Device driver. (Page 1 [0002] & Page 5 [0055])

Regarding claim 6, Michaelis teaches receiving or transmitting data on the second wireless transceiver circuit in accordance with the relative priority of the third priority indication to the first priority indication comprises receiving or transmitting data on the second wireless transceiver circuit if the third priority indication has a higher priority than the first priority indication. (Page 1 [0004] "interface priority may be explicitly identified" and Page 2 [0025] "request a specific network interface, e.g. for a service tied to a specific service bearer")

Regarding claim 7, Michaelis teaches the first priority indication for the first wireless transceiver circuit is given priority to receive or transmit over a second wireless transceiver circuit. (Page 1 [0004-0007] and Fig. 6)

Regarding claim 8, Michaelis teaches a first wireless transceiver circuit comprises a WLAN wireless interface device (Fig. 1 [14H]) and the second wireless transceiver circuit comprises a Bluetooth wireless interface device (Fig. 1 [14G]).

Regarding claim 9, Michaelis teaches the first wireless transceiver circuit comprises a first Bluetooth wireless interface device and the second wireless transceiver circuit comprises a second Bluetooth wireless interface device. (Page 2 [0018-0020] "Bluetooth personal area network interfaces")

Regarding claim 10, Michaelis teaches the first wireless transceiver circuit is compliant with Bluetooth (Fig. 1 [14G]) and the second wireless transceiver circuit is compliant with IEEE 802.11(b) or IEEE 802.11(g). (Fig. 1 [14H] & Page 2 [0018])

Regarding claim 11, Michaelis teaches an apparatus for coordinating wireless communication includes a first wireless interface circuit (Fig. 2 [20A-20N & 22A-22N]) for performing receiving or transmitting operations of a first type of wireless communication having a first priority level selected from a first plurality of levels (Page 1 [0004-0005]), a second wireless interface circuit (Fig. 2 [20A-20N & 22A-22N]) for performing receiving or transmitting operations of a second type of wireless communication having a second priority level selected from a second plurality of priority levels (Page 1 [0004-0005]), an interface coupling the first and second wireless interface circuits for transmitting priority levels between the first and second wireless interface circuits (Page 1 [0004-0007]) and a controller for coordinating the operations of the first or second wireless interface circuits in relation to a relative priority of the first and second priority levels including level adjustment logic depending upon the detection of predetermined conditions. (Page 1 [0004-0007] and Page 2 [0025])

Regarding claim 12, the limitations of claim 12 are rejected as being the same reason set forth above in claim 10.

Regarding claim 16, Michaelis teaches a predetermined condition comprises real-time human interface device traffic being transmitted or received on the second wireless interface circuit and the priority level adjustment logic increments the priority level. (Page 1 [0004-0007] and Page 2 [0017 & 0025])

Regarding claim 17, Michaelis teaches the predetermined conditions comprise user specified priority level being entered for the second wireless interface circuit and the priority level adjustment logic increments the second priority level above the first priority level in response to detecting the user-specified priority level. (Page 1 [0004-0006], Page 2 [0025] and Page 5 [0055])

Regarding claim 18, Michaelis teaches the predetermined condition comprises audio-video traffic being transmitted or received on the second wireless interface circuit so that the controller protects the second wireless interface circuit from interference caused by the first wireless interface circuit by adjusting the second priority level to a maximum level and the first priority level to a minimum level. (Page 4 [0040] and Page 5 [0049-0053])

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2, 13-15, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michaelis in view of Unruh (US 2003/0161288).

Regarding claim 2, Michaelis teaches a wireless communication device that includes wireless transceiver circuits (Fig. 2 [20A-20N & 22A-22N]) that transmit depending upon priority indications (Page 1 [0004-0006]), but differs from the claimed invention by not explicitly reciting MAC layer modules are directly coupled together so that priority indication may be transferred between the MAC layer modules.

In an analogous art, Unruh teaches an access terminal (Fig. 1 [100]) that includes MAC layer modules (Fig. 1 [110, 112, 114, 116 & 118]) coupled to the wireless transceiver circuits so that priority indications can be transferred between the MAC layer modules. (Pages 2-3 [0028]) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the wireless communication device of Michaelis after modifying it to incorporate the MAC layer priority communications of Unruh. One of ordinary skill in the art would have been motivated to do this since the MAC controller is able to select the appropriate wireless carrier for the transmission and convert each packet to the appropriate carrier protocol. (Pages 2-3 [0028])

Regarding claim 13, Michaelis teaches a wireless communication device that includes wireless transceiver circuits (Fig. 2 [20A-20N & 22A-22N]) that transmit depending upon priority indications (Page 1 [0004-0006]), but differs from the claimed invention by not explicitly reciting MAC layer modules are directly coupled together so that priority indication may be transferred between the MAC layer modules.

In an analogous art, Unruh teaches an access terminal (Fig. 1 [100]) that includes MAC layer modules (Fig. 1 [110, 112, 114, 116 & 118]) coupled to the wireless transceiver circuits so that priority indications can be transferred between the MAC layer modules. (Pages 2-3 [0028]) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the wireless communication device of Michaelis after modifying it to incorporate the MAC layer priority communications of Unruh. One of ordinary skill in the art would have been motivated to do this since the MAC controller is able to select the appropriate wireless carrier for the transmission and convert each packet to the appropriate carrier protocol. (Pages 2-3 [0028])

Regarding claim 14, Michaelis in view of Unruh teaches first and second MAC layer modules for the first and second wireless interface circuits. (Fig. 1 [110-118])

Regarding claim 15, Michaelis in view of Unruh teaches using a cellular telephone network, which obviously includes receiving and transmitting real time data. (Michaelis Page 2 [0017], Unruh Pages 1-2 [0018], [0028] and Page 5 [0047])

Regarding claim 19, Michaelis teaches a method of coordinating wireless communications between two wireless transceiver circuits by assigning first and second priority indications to first and second transceiver circuits where each priority indication may be selected from a plurality of available priority indications (Page 1 [0004-0006]), receiving or transmitting data on the first wireless transceiver circuit in accordance with the relative priority indication to the second priority indication (Page 1 [0005]), detecting a predetermined application that configured to receive or transmit data on the second

wireless transceiver circuit (Page 1 [0003]), a means for adjusting the second allocated priority to be higher than the first allocated priority if real-time human interface traffic is detected on the second means (Page 1 [0004-0007] and Page 2 [0017 & 0025]) and coordinating performance so that the priority indications are met. (Page 1 [0004-0006]) Michaelis differs from the claimed invention by not explicitly reciting the user of MAC layer modules for communicating priority levels between wireless interface circuits.

In an analogous art, Unruh teaches an access terminal (Fig. 1 [100]) that includes MAC layer modules (Fig. 1 [110, 112, 114, 116 & 118]) coupled to the wireless transceiver circuits so that priority indications can be transferred between the MAC layer modules. (Pages 2-3 [0028]) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the wireless communication device of Michaelis after modifying it to incorporate the MAC layer priority communications of Unruh. One of ordinary skill in the art would have been motivated to do this since the MAC controller is able to select the appropriate wireless carrier for the transmission and convert each packet to the appropriate carrier protocol. (Pages 2-3 [0028])

Regarding claim 20, Michaelis in view of Unruh teaches the priority levels are evaluated on a packet-by-packet basis to detect if real-time human interface traffic is present. (Michaelis Page 1 [0004-0007] and Page 2 [0017 & 0025])

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US 2004/0204031 to Kardach et al. regarding methods and apparatus for communicating with varying transceiver circuits.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Sams whose telephone number is (571)272-8099. The examiner can normally be reached on M-F 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MCS
3/20/2006

Note: The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER